DOCUMENT RESUME

ED 302 934 EA 020 619

AUTHOR Leitner, David
TITLE Principal Instructional Management Behavior and School Effectiveness: An Organizational Perspective.
PUB DATE Apr 88
NOTE 52p.; Paper presented at the Annual Meeting of the American Educational Research Association (New Orleans, LA, April 5-9, 1988).
PUB TYPE Speeches/Conference Papers (150) -- Reports - Research/Technical (143)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS *Academic Achievement; Administrator Role; Elementary Secondary Education; *Instructional Effectiveness; *Instructional Leadership; Leadership Responsibility; Multivariate Analysis; Outcomes of Education; *Principals; Questionnaires; Regression (Statistics); School Effectiveness; *Teacher Administrator Relationship
IDENTIFIERS Instructional Management Questionnaire

ABSTRACT

This study uses an organizational perspective to investigate three questions regarding the principal's role in instructional management: (1) Do instructional management behaviors predict student achievement? (2) What specific instructional management behaviors are identified with principals in effective schools? and (3) Are the linkages that principals use to influence teacher behavior and instruction related to student achievement? An Instructional Management Questionnaire (IMQ) was used to collect data on the principal's role in instructional management from the teachers at 29 participating elementary schools from February to April 1987. These data were analyzed using a multivariate regression model to provide information on whether principal instructional management behaviors are associated with student achievement. The three instructional management linkages that principals use to influence teacher behavior (cultural, structural, and interpersonal) were then identified and analyzed using a multivariate regression model. Next, data were collected from observations and interviews of four principals at schools identified as effective, in order to discover specific instructional management behaviors used by principals in effective schools. Finally, data were collected on two possible alternative explanations for the differences in school effectiveness: school conditions and school personnel. Findings, so far available only for the first question, suggest that there is little evidence to suggest a strong relationship between principals' instructional management behavior and student achievement. Appended are Hallinger's Three Dimensions of Instructional Management and Eleven Subfactors (1983). A bibliography is included. (TE)

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PRINCIPAL INSTRUCTIONAL MANAGEMENT BEHAVIOR AND SCHOOL EFFECTIVENESS: AN ORGANIZATIONAL PERSPECTIVE

David Leitner
Portland Public Schools

U.S. DEPARTMENT OF EDUCATION
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Presented before the American Educational Research Association
New Orleans, LA
April, 1988

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INTRODUCTION

In the last two decades, the effective schools research literature has generated prescriptions for improvement that districts, schools and classrooms have adopted to increase student achievement. The research on school effects has consistently found five factors correlated with effective schools. They are:

Strong principal leadership: (Hallinger, 1983; Dwyer et al., 1984; and Edmonds, 1979)
High Expectations: (Armour et al., 1976; Weber, 1971).
Basic skills achievement: (Edmonds, 1979).
Supportive school climate: (Brookover, 1979; Weber, 1971).
Frequent monitoring of student progress: (Edmonds, 1979; Weber, 1971).

This study examines one area in this research literature; the principal's role in instructional management. Instructional management, a part of principal leadership, is defined as the manipulation of resources, rules, procedures, goals and personnel with the purpose of improving school programs and effectiveness.

The implicit and sometimes explicit conclusion of the effective schools literature, including that on principal leadership, is that if schools and principals adopt practices derived from the above five findings, they too will become effective. In fact, numerous cities (Milwaukee, Seattle, New York, Arlington and Chicago) and states (Louisiana, Connecticut, and New Jersey) have implemented school improvement projects based on the above findings (Teddlie and Stringfield, 1985; Eubanks and Levine, 1983; and Edmonds, 1982). Preliminary evaluations of these projects indicate mixed results.

More recently, a number of reviews (Purkey and Smith, 1983; Ralph and Fennessey, 1983; MacKenzie, 1983; and Rowan, Bossert and Dwyer, 1983) have cautioned practitioners about blindly accepting the research findings since the research contains conceptual and methodological problems. Since the criticisms of the effective schools research has been reviewed thoroughly elsewhere, a detailed analysis is not presented here. Suffice it to say that there are both conceptual and methodological problems with the research. Conceptually, the research lacks a theoretical framework that identifies why schools are effective and what principals do to influence school effectiveness. Methodologically, the research lacks a longitudinal analysis of school effectiveness, defines school effectiveness from a narrow sample of student achievement test scores, compares effective schools with only ineffective schools, and investigates usually low SES schools in urban areas.

It is apparent that some of the available methods used to investigate effective schools, in general, and the principal's role in instructional management, in particular, are inadequate. The study addressed the conceptual and methodological problems identified above through an improved research design. Specifically, the study investigated whether specific principal instructional management behaviors are associated with school effectiveness.

DEFINITION OF RESEARCH PROBLEM

The principal's role in instructional management has been studied extensively and conflicting results have been reported (Dwyer et al., 1983; Lightfoot, 1983; Teddlie and Stringfield, 1985; and Edmonds, 1979). On the one hand, many descriptive studies emphasize that the principal's time is fragmented and is not concerned with instructional matters (Dwyer et al., 1985). These findings are supported by self-report studies about how principals spend their time (Lortie, 1983; Helble, 1931). On the other hand, many effective school studies emphasize the importance of the principal's role in instructional management in creating effective schools (Teddlie and Stringfield, 1985; Armour et al., 1976). I will discuss two possible reasons for the discrepancy.

Dwyer et al., (1985), argue that one reason for the discrepancy is that descriptive studies often fail to detect the overarching perspective that guides the principal's apparently fragmented actions. This is the glue that provides meaning and purpose to the apparently fragmented behavior. Many of these descriptive studies which focus on discrete behaviors do not identify the purpose behind the behavior and therefore do not recognize the importance and relationship of the principal's behavior to instructional management. Thus, the behavior is not labelled as instructional management.

Another possible reason for the discrepancy is that these

descriptive and effective school studies are investigating different levels of behavior. The descriptive studies identify the principal's specific behaviors. Effective school studies, on the other hand, have seldom defined the principal's role with specific behaviors (Hallinger, 1983; Dwyer et al., 1985). Even some of the earlier case studies in the effective schools research fell far short of actually describing specific behaviors involved in instructional management, eg., Weber, 1971, Brookover and Lezotte, 1979; Venezky and Winfield, 1979. Rather, most effective school studies have identified only general behaviors, eg., promotes positive school climate. In other words, while effective school studies emphasize the importance of the principal in instructional management, they do not describe specific principal behaviors, and while descriptive studies identify the specific behaviors, the behaviors are not viewed as important. In order to identify the specific instructional management behaviors associated with school effectiveness, an "effective school" type study, which identifies the general behaviors associated with school effectiveness, must be conducted simultaneously with a descriptive study that will actually identify the specific behaviors that comprise these general categories. The descriptive study will also serve as a validity check of any instructional management behaviors found to be associated with school effectiveness. In addition, there must be a conceptual framework that provides meaning to the relationship among the principal's instructional management behavior, teacher

behavior and school effectiveness. The next section describes a conceptual framework about the principal's relationship with teacher behavior and effectiveness as conventionally defined.

Conceptual Framework

The relationship of the principal's instructional management behavior to instruction and student outcome is analyzed from an organizational perspective. From this perspective, an organization is seen as comprised of two environments, the institutional and technical. The institutional environment refers to the rules, roles and programs that schools maintain so as to be defined as rational and legitimate by society. For example, it includes teacher accreditation, graded schools and specified curriculums. The technical environment refers to those parts of the environment concerned with goal setting and goal attainment (Thompson, 1967; Meyer, Scott, and Deal; 1979). Conceptually, it includes the inputs, the transformation process (or technical core) and the outputs of the organization. The transformation process or technical core is defined as the central task of the organization and includes the skills of the personnel used in carrying out their task (Scott, 1981). Operationally, the technical environment of schools includes the relationship between students (inputs) and student outcomes (outputs) as mediated by the skills of the teacher in instruction, the technical core. The study focuses on the principal's relationship to the technical environment.

The technical environment of most organizations contains organizational structures that help coordinate and control the transformation process in a rational, efficient manner. These structures include a division of labor that specifies who does what to accomplish the goal, work procedures that identify specific job procedures and communication patterns that delineate working relationships between actors and subunits (Meyer, Scott, and Deal, 1979). The technical environment of schools differs from the above description. First, schools have multiple goals that are often unclear and ambiguous to staff. Moreover, school goals tend to be unstable over time. As a result, the division of labor is not well defined so that teachers work on overlapping and sometimes competing goals. Second, schools utilize an uncertain technology (instruction) to achieve its goals. There are numerous teaching strategies and techniques to instruct children, but it is difficult to identify the exact behaviors which comprise each instructional strategy and which are the most efficient. Thus, teachers' specific work procedures are not identified and the relationship among inputs (students), instruction and outputs (student learning) is uncertain. Third, there is a fluid participation of people in the technical environment. Students and teachers move in and out of the system sporadically resulting in changing communication patterns (Rosenholtz, 1985). Thus, a school's technical environment is characterized as ambiguous, uncertain, and lacking coordination and interdependence (Scott, 1981).

The role of a manager in an organization with a predictable technology (ie., where the relationship between the inputs and outputs is predictable) is to protect the work process from disturbances in the environment and to control and coordinate it to ensure efficiency (Thompson, 1967). A manager's responsibilities include designating rules and roles, controlling resources and providing incentives to workers. In contrast to the role of a manager in an organization with a predictable technology is the role of a principal whose organization's technology, ie., instruction, is uncertain. Under conditions where school goals are ambiguous, and when the instructional activities implemented to achieve those goals are varied and uncertain, principals tend to avoid direct manipulation of teacher behavior and instruction to increase efficiency since it is difficult to know or to verify which changes would increase efficiency. Thus, rather than focusing on strict rules regarding instructional activities, principals focus on tasks over which they have some control and that appear to impact outcome. For example, principals become involved in maintaining the school building and administrative structures. On a conceptual level, principals attend to the institutional rather than the technical environment. As a result, instructional activities, ie.,technical environment, are decoupled from or are loosely-coupled with the institutional environment or authority structure (Weick, 1976). Operationally, the decoupling or loose-coupling refers to the principal's lack of control over instructional activities and to

the lack of congruity between them (Rosenholtz, 1985). This, perhaps, describes why principals spend more of their time in administrative matters than in supervising and evaluating instruction (Lortie, 1973). The principal is decoupled from the teacher and classroom.

The unpredictability of the results of instructional activities is heightened by the fact that teachers are also loosely-connected i.e., teachers are isolated. Teachers rarely communicate with other teachers about instructional matters (Lortie, 1973). Thus, there is little interdependence and coordination between teachers regarding instructional activities which serves to increase the unpredictability of instruction in producing student outcome (Rosenholtz, 1985). In all, the school's technical environment is marked by goal ambiguity, unpredictability of instructional activities, and a lack of interdependence and coordination between teachers in the instructional process.

In contrast to the above description of the principal's lack of influence on teacher behavior and instruction due to the characteristics of its technical environment, are findings from the effective schools research. Hallinger (1983), based on a review of the effective schools research literature, identified three general dimensions of instructional management (defines the school's mission, manages the instructional program and promotes a positive learning environment) through which principals influence teacher behavior and instruction. The three general

dimensions were then divided into eleven more specific instructional management behaviors: frames the school's goals, communicates school's goals, supervises and evaluates instruction, coordinates curriculum, monitors student progress, protects instructional time, promotes instructional improvement and professional development, maintains high visibility at school, provides incentives for teacher, enforces academic standards and provides incentives for learning. See Appendix A for definitions of the three dimensions and eleven subfactors. He argued that these principal behaviors tightly couple the school's goals and instruction and improves coordination among teachers, thereby improving student achievement. Thus, effective schools are viewed as more tightly coupled in curriculum and instruction than recent descriptions from organization theory have depicted. Although such findings do not mean that schools are tightly coupled, rational bureaucracies, it does suggest the degree of loose coupling varies across schools and may be related to school effectiveness. More importantly, it suggests that "loose-coupling" is not static; principals can influence the degree of loose- coupling by influencing teacher behavior and instruction.

Various authors have offered explanations about how principals attempt to influence teacher behavior and instruction to improve school effectiveness (Bossert et al., 1982; Firestone and Wilson, 1985; Miskell et al., 1983; Peterson, 1984: Rosenholtz, 1985; Wilson and Corbett, 1985). All maintain that

principals can influence teacher behavior and instruction through some form of formal bureaucratic or structural linkage, but authors differ about how principals influence teacher behavior informally: cultural and interpersonal (Wilson and Corbett, 1985); cultural (Firestone and Wilson, 1985); informal structure (Miskel et al., 1983); goal consensus and collegial relations (Rosenholtz, 1985). The conceptual model used here is posited by Wilson and Corbett (1985).

Wilson and Corbett (1985) identify three types of within school linkages through which the principal can influence teacher behavior and instruction: cultural, structural and interpersonal linkages. Cultural linkages refer to organizational mechanisms which create or coordinate similar behavior patterns among organizational members by developing shared definitions. A common means to promote cultural linkages is to attempt to create clearly defined, shared goals. It permits organizational members to establish a base of attachment to the organization. Structural linkages are bureaucratic linkages and refer to mechanisms through which principals can translate their intent to control members' behavior. This linkage can be used directly through the exercise of formal authority such as rules and enforcement activities, or indirectly by limiting the discretion of members to perform their tasks, such as the degree of discretion teachers are allowed over their classroom tasks. Interpersonal linkages occur when staff are able to discuss their work or to observe others at their work roles. It promotes

Conceptual Framework

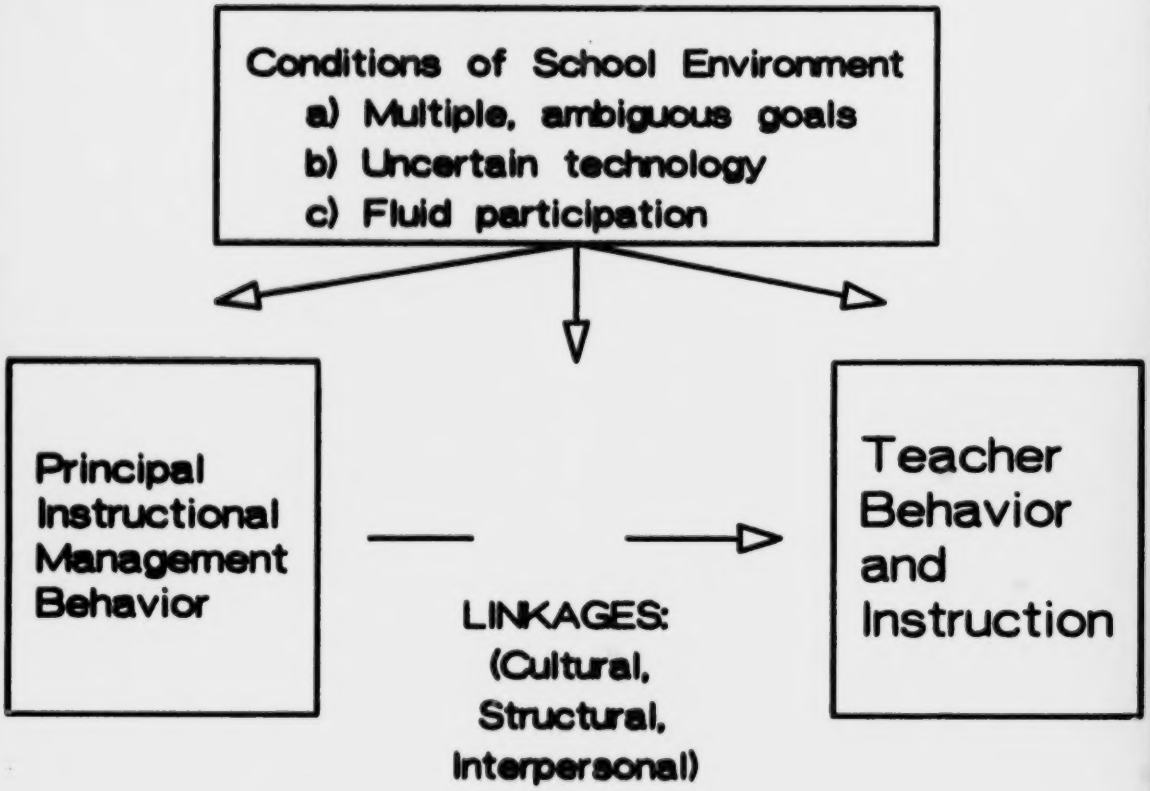

Figure 1.

greater knowledge of instructional strategies and increases the degree of interrelatedness among staff.

It is easy to see that some of the eleven behaviors used by principals in effective schools (Hallinger, 1983) can be matched with one of the three linkages that principals use to influence teacher behavior. For example, the principal behavior, "communicates the school's goals" can be defined as a cultural linkage since it is a means by which the principal can create clearly defined, shared goals. The principal behavior, "supervises and evaluates instruction", can be identified as a structural linkage since it is a mechanism that principals can use to directly control teachers' behavior. Finally, the principal behavior, "promotes instructional improvement and professional development", can be identified as an interpersonal linkage since through it principals create an opportunity for staff to discuss their work. Thus, it is possible for the three linkages to be matched with the eleven behaviors associated with principals of effective schools. More importantly, the results of a match may provide an explanation of how the behavior of principals in effective schools differ in one way from the behavior of principals in other schools.

The above definitions of the linkages and previous description of the technical environment suggest that the linkages may be helpful in explaining how principals influence teacher behavior and instruction. For example, it suggests that managers in environments with clear goals and predictable

technologies would probably emphasize structural rather than cultural or interpersonal linkages to influence and control the work process since it provides a method of direct control over work. It suggests also that managers in environments with multiple goals and uncertain technologies, such as principals, probably do not rely on structural linkages because of the uncertainties characteristic of their technical environment. However, it is not known whether principals, in general, rely on cultural and interpersonal linkages or on yet some unidentified linkage, if any at all. Furthermore, although the effective schools research literature suggests that principals in effective schools have tighter couplings with teachers and instruction than other schools, it is not clear which linkage principals use to influence teacher behavior and instruction.

Questions: The proposed study will address the following questions.

1. Are the instructional management behaviors of principals predictive of student achievement?

2. What are the specific instructional management behaviors which are identified with principals in effective schools. This is a descriptive part of the study and will be based on observations and interviews.

3. Are the linkages that principals use to influence teacher behavior and instruction related to student achievement?

METHODOLOGY

An ex post facto research design that used both quantitative and qualitative research methods were used to investigate the principal's role in instructional management. The methodology is divided into two parts to facilitate its discussion. Generally speaking, Part I includes the procedures that were necessary to administer a questionnaire on instructional management (the IMQ) and analyze the data. Results from these procedures produced information to answer two questions posed by the study. Part II includes the procedures necessary to conduct the principal observations and interviews. Results from the procedures from Part II produced information to answer the third question posed by the study. This methodology is briefly described below.

Part I: Data were collected on the principal's role in instructional management from teacher responses on the IMQ. The questionnaire was administered to teachers at participating schools during a three-month period from February to April, 1987. These data were analyzed using a multivariate regression model where school effectiveness was regressed on measures of instructional management, and the SES of the students. The results from these procedures provided information on the question, Are principal instructional management behaviors associated with student achievement?

In addition, I identified the correspondence between instructional management behaviors and behaviors associated with the three linkages (cultural, structural and interpersonal) that

principals use to influence teacher behavior. I asked ten individuals knowledgeable in education and organizational theory to match descriptions of principal instructional management measured by subscales on the IMQ with behaviors associated with the three linkages, where possible. Each linkage, thus, was measured by those subscales that were matched to it. The relationship of the three linkages with school effectiveness was also analyzed using a multivariate regression model where school effectiveness was regressed on measures of the linkages, and SES. The results from these procedures provided information on the question, Are the linkages used by principals to influence teacher behavior and instruction related to school effectiveness?

Part II: Data were collected from principal observations and interviews. Based on data about levels of school effectiveness and SES, four principals from schools identified as effective and at different SES levels were selected and agreed to be "shadowed". Each principal was observed by the investigator for a total of thirty hours, in three-hour intervals at different times during the school day. The observations occurred over a five-month period from February to June, 1987. Each of the four principals was interviewed at the end of the observation series to obtain background information that would help provide meaning to his/her behavior. Data from these procedures provided information to the question, What are the specific instructional management behaviors used by principals in effective schools?

Finally, data were collected on two possible alternative

explanations for the differences in school effectiveness: school conditions and school personnel. Data on per pupil expenditure, school and class size were collected as measures of school conditions. And data on teachers (years of teaching experience) and the principal (gender, years of experience as principals, years of experience as principal at current site) were collected as measures of school personnel.

Research Design:

This section describes the dependent and independent variables in the study and how they were measured. Table 1 identifies each of these variables.

Table 1
Dependent, Independent and Control Variables
and Their Measures

Type	Variable	Operational Measure
Dependent:	School Effectiveness	Student Achievement Scores
Independent:	Instructional Management	IMQ
	Linkages	Specific Subscales from IMQ
Control:	Socio-economic Status	Free and Reduced Lunches

Dependent Variable:

The dependent variable in the study was school effectiveness. Conceptually, school effectiveness is defined as a school's performance given the resources within the school.

Operationally the level of school effectiveness was determined by regression analysis where Spring student achievement was regressed on Fall student achievement. School effectiveness was evaluated according to its residual - the difference between its actual achievement and the achievement that was expected given its social composition. The residual became the dependent variable and serves as an indication of achievement gain.

Student achievement was measured by the Portland Achievement Levels Tests (PALT). The PALT is a locally developed, curriculum-aligned survey achievement test administered in the Fall and Spring to students in grades 3-8 in reading, mathematics and language usage[1]. Test scores from the PALT are based on equal-interval scales, determined through Rasch-calibration.

Independent Variables:

Two independent variables were measured: principal instructional management behavior and the linkages used by principals to influence teacher behavior. Operationally, instructional management was measured by the IMQ, a modified form of the Instructional Management Rating Scales (Hallinger, 1983). The modifications are discussed later in this chapter. The IMQ is divided into three general dimensions of instructional management: defines the school's mission, manages the instructional process, and promotes a positive school climate. The three general dimensions are divided into a total of 10 subscales. Three separate measures of instructional management

were taken from the IMQ: the total score, the three general dimensions and the 10 subscales of instructional management. See Appendix A for definitions of the three dimensions and 10 subscales. An assessment of the reliability and validity of the instrument is discussed later.

The three linkages that principals use to influence teacher behavior were also measured by subscales on the IMQ. That is, behavioral descriptions of the subscales on the IMQ were matched to behaviors representative of the three linkages, where possible. The subscales that were matched to a specific linkage became the measure for that linkage. Results of the matching process are discussed later.

Control Variables:

Information was collected on the socioeconomic status (SES) of the parents of the students at the school. The number of students who received free and reduced lunches was used as the proxy of SES. Percentages and standard scores were determined for the number of students receiving free and reduced lunches.

Selection of Subjects:

The study was conducted in School District No. 1, Portland, Oregon. Portland School District is an urban school system with approximately 53,000 students in over 85 schools. Elementary school (K-8) principals and teachers were invited to participate in the study. Participation in the study was voluntary and only

principals and teachers who met initial eligibility criteria were selected.

Part I: Principals were invited to volunteer their schools and thus their teachers, to complete the IMQ. Schools were eligible if the principal had at least two years of experience in their current school assignment as of September 1, 1986. This criterion was established based on the assumption that it takes principals at least two years to establish instructional management behavior patterns with staff. Of the 77 elementary principals, there were 38 eligible principals: 31 primary (K-5) and 7 middle (6-8) school principals. Of the 38 eligible principals, 29 volunteered[2] to participate in the study, 24 primary and 5 middle schools.

Teachers were invited to participate in Part I of the study if they met two criteria. First, of course, teachers had to teach in schools where eligible principals had volunteered their staff to complete the IMQ. Second, teachers had to have at least one year of experience at their current school as of September 1, 1987. This criterion was established based on the assumption teachers must work with their principal for at least one year before they can accurately describe his/her instructional management behaviors. Although the exact number of teachers who were eligible was not obtained, it was estimated that over 95% completed the IMQ.

Part II: Eligible principals were asked to participate as subjects of observations if their school was considered high in

effectiveness, i.e., the school's observed student achievement was at least one standard deviation above their predicted achievement. There were only five eligible schools that met this criterion, two schools were low SES schools, two were high SES and one was middle SES. All five principals were asked to participate, and all five agreed, but only four could participate in the timeframe set for the study. Two principals were from high SES schools, one was from a low SES school and the fourth was from a middle SES school.

Instrumentation:

Four instruments were either developed or modified for the study. They were: the IMQ, a questionnaire that matched specific instructional management behaviors with specific linkages, the Observation Form, and a set of interview questions and procedures. These four instruments are discussed below.

Instructional Management Questionnaire: The IMQ is a modified form of the Instructional Management Rating Scales (Hallinger, 1983) that better distinguishes between respondents who accurately completed the questionnaire and respondents who might have simply marked down one side of the questionnaire. In order to guard against that type of response bias, the wording of 20 of 65 items from the Rating Scales was reversed so that the respondent had to mark at least some items on the other of the scale to be consistent with his/her other responses. Finally, one subscale "Providing Incentives to Students" was not included as

part of the IMQ since the study investigated the relationship between principals and teachers, not students.

In order to determine the usefulness of the IMQ in answering the questions posed by the study, it had to meet certain standards of reliability and validity. I employed the method of interrater reliability to assess the IMQ's reliability. In order to determine the interrater reliability of the IMQ, I followed a procedure suggested by Ebel (1951) for estimating the reliability of sets of ratings when the number of ratings varies among schools. Specifically, a one-way analysis of variance (ANOVA) was conducted for each of the 10 subscales across the 27 schools.

Table 2 shows that the subscale reliability coefficients across the 27 schools. All the reliability coefficients are above .60, between .65 and .89. I conclude that the subscales of the IMQ are reliable based on the methods employed. Moreover, the IMQ is a reliable instrument that provides consistent data.

Table 2
Instructional Management Behavior:
Subscale Reliability

Subscale	Reliability Coefficient
Frames Goals	.76
Communicates Goals	.74
Super. & Eval. Instruction	.76
Coordinates Curriculum	.65
Monitors Progress	.67
Protects Instructional Time	.80
Maintains Visibility	.89
Provides Teacher Incentives	.80
Promotes Prof. Development	.70
Promotes Academic Standards	.80

The general technique used in this study to assess validity

was subscale correlations. Two standards were employed to judge the acceptability of the IMQ's validity measures. First, the subscale's intercorrelations should be lower than the subscale's reliability coefficients to show that each subscale correlates more highly with each other than among items in other subscales. Second, the subscales intercorrelations should be low (i.e., less than .60) to suggest that the subscales are measuring distinct job functions.

Table 3 shows the subscale intercorrelations of the IMQ. The reliability coefficients for each subscale are displayed in parentheses.

Table 3
Subscale Intercorrelation Matrix

	Subscales									
	1	2	3	4	5	6	7	8	9	10
1	(.76)	.67	.56	.59	.52	.44	.41	.42	.53	.53
2		(.74)	.57	.52	.44	.44	.39	.43	.50	.53
3			(.76)	.59	.46	.50	.52	.47	.55	.56
4				(.65)	.59	.43	.42	.44	.56	.56
5					(.67)	.35	.38	.35	.55	.43
6						(.80)	.45	.39	.45	.52
7							(.89)	.54	.61	.45
8								(.80)	.66	.43
9									(.70)	.52
10										(.80)

The results show that the intercorrelations meet the first standard to judge the validity of the IMQ. i.e., the subscale's intercorrelations are less than the subscale's reliability coefficients.

Table 4 shows the number of intercorrelations for each

subscale that exceeds .60. There are only three intercorrelations that are above .60. Although the three intercorrelations indicate that a few subscales on the IMQ are related empirically, this result is not unexpected given the nature of the construct, instructional management. Thus, the findings support the statement that the IMQ possesses construct validity. The results of the methods and standards used to determine the IMQ's reliability and validity support the use of the instrument to examine the relationships between principal instructional management behavior and linkages with student achievement.

Table 4

Number of Subscale Intercorrelations Exceeding .60

Subscale	No. of Intercorrelations Greater than .60
1. Frames Goals	1
2. Communicates Goals	1
3. Supervises and Evaluates Instruction	0
4. Coordinates Curriculum	0
5. Monitors Progress	0
6. Protects Instructional Time	0
7. Maintains Visibility	1
8. Provides Incentives for Teachers	1
9. Promotes Staff and Professional Development	2
10 Promotes Academic Standards	0

Questionnaire to match principal behaviors with linkages: I developed a questionnaire to identify the instructional management behaviors that correspond to the linkages that principals use to influence teacher behavior. The questionnaire was administered to ten graduate students in Education who were knowledgeable of organizational theory. They were asked to match

behavioral descriptions of the subscales (Hallinger, 1983) with behavioral descriptions of the linkages (Wilson and Corbett, 1983). A subscale was labelled a designated linkage if the correlation of subscales with linkages by raters was at least .80. Subscales were not assigned to a linkage if they did not meet the standard.

Table 5 shows the correlation of subscales with linkages and the linkage to which each subscale was matched. In all, eight of the ten subscales had coefficients of at least .80.

Table 5
Interrater Agreement of Instructional Management Behavior with Linkage.

SUBSCALES	INTERRATER AGREEMENT	LINKAGE
Frames School Goals	.90	Structural
Communicates School Goals	.80	Cultural
Supervises/Evaluates Instruction	1.00	Structural
Coordinates Curriculum	1.00	Structural
Monitors Student Progress	1.00	Structural
Protect Instructional Time	.60	
Promotes Staff Development	.80	Interpersonal
Maintains High Visibility	.80	Cultural
Provides Teacher Incentives	.80	Cultural
Enforces Academic Standards	.50	

The subscales of communicating the school's goals, maintaining high visibility at school and providing incentives to teachers were identified as a cultural linkage. The subscales of framing the school's goals, supervising and evaluating instruction, coordinating the curriculum, and monitoring student progress were identified as a structural linkage. The subscale, promoting personal and professional development, was identified as an

interpersonal linkage. Two subscales (protecting instructional time and enforcing academic standards) did not meet the standard and thus were not matched with a linkage.

Observation Form:

An observation form was developed to facilitate data collection while conducting principal observations. Specifically, the following information was collected for each behavioral event: the time of day, the location of the interaction, who initiated and who was involved in the interaction, and a narrative description of the behavior itself (Gross, 1986)[3]. The format of the instrument then served as the format for how the data was organized and entered into the computer.

Interview Questions and Procedures:

A set of questions and procedures were developed to be used for the principal interviews in order to obtain background information about the principals' instructional management behaviors. Many of the questions were taken from the interview structure used by Dwyer et al., (1983).

Field Procedures:

This section briefly describes the field procedures for administering the IMQ, and observing and interviewing principals.

Part I:

Instructional Management Questionnaire:

After each principal agreed to participate, we set a date to administer the questionnaire to his/her teachers at a staff meeting. On the designated date, an investigator attended the staff meeting, which was typically shortened so that the questionnaire could be administered without keeping teachers over the normal time allocated to staff meetings. When the meeting was turned over to the investigator, the principal left the room. The investigator then read a statement to the teachers regarding the purpose of the study and confidentiality of their responses. After all the questionnaires were collected, the investigator thanked the teachers and the principal for his/her participation in the study.

Part II:

Principal Observations:

I established times and procedures for the observations with each principal. Each observation was scheduled for three hours and was arranged at different times of the day in order to obtain a complete picture of the principal's day. This meant that some observations began before 8:00 a.m. and other observations ended after 5:00 p.m. Each day, I arrived at the school 15 minutes early in order to clarify any questions regarding the previous observation.

Procedures for the observations were established in order to

reduce concern and disruption of school activities. Thus, prior to the observations, the principal explained the purpose of the study to staff. The principal gave a similar explanation to outsiders who visited the school, when necessary. Since the purpose of the observations was to describe what principals do, it was important to observe principals in all situations. However, there were times, due to the characteristics of the situation, that the principal required privacy. In these cases, we developed a signal for the principal to indicate that he/she needed to be alone. Afterwards, the principal provided me with a description of the activity. There were only two instances where a principal required privacy.

Principal Interviews:

I conducted reflective interviews with the four principals who were observed. The interviews provided principals the opportunity to add history, interpretation and meaning to the days' events, especially to events coded as instructional management or a type of linkage. The interviews were scheduled for two hours and were tape-recorded. Additional time was required for only one principal. A set of interview questions and procedures were used to provide structure to the interview. Principals could to stop the recorder to ask for clarification of a question or to think about their response.

RESULTS and DISCUSSION

Data are currently available to discuss one of the three questions posed by the study: Are principal instructional management behaviors related to school effectiveness? Data are not available at this time to answer the second and third questions in the study: Are the linkages that principals use to influence teacher behavior related to school effectiveness? and, What are the specific instructional management behaviors associated with principals in effective schools?

Instructional management and student achievement. Table 6 presents the results of data analysis on the relationship of instructional management to student achievement. Separate multiple regressions were calculated for three levels of measure of instructional management from the IMQ (total score, scores on the three dimensions, and scores on the 10 subscales), for each subject area (reading, math and language). A total of nine multiple regressions were calculated.

First, achievement gain was regressed on the total score on the IMQ and SES. The data show that the total score on the IMQ does not significantly explain any variance of achievement gain in reading, math and language usage. Only in language usage, did the total score on the IMQ approach significance, $p < .08$. Thus, the data show there is little relationship between student achievement and the total score on instructional management.

Table 6
Results of Regression Analyses for Three Levels
of Measurement of Instructional Management Behavior:
Total Score, Three Dimensions, and 10 Subscales
1985-86

MATH:

Total Score

Variable (N=27)	Coefficient	SE	t
Total IMQ	.01	.01	.87
SES	-1.89	.12	.00
Constant	-1.71	1.94	-.88

Three Dimensions

Variable (N=27)	Coefficient	SE	t
Climate	.05	.04	1.05
SES	.04	.13	.31
Goal	.06	.05	1.08
Instruction	-.02	.02	-.80
Constant	-1.10	1.99	-.55

Ten Subscales

Variable (N=27)	Coefficient	SE	t
Standards	.23	.24	.97
Visibility	.32	.15	2.13*
Monitor	.11	.06	2.08*
SES	.05	.14	.39
Communicate	.01	.16	.09
Recognize	.11	.15	.77
Time	-.37	.17	-2.18*
Curriculum	-.36	.14	-2.49*
Supervision	.02	.08	.29
Frame	.25	.15	1.64
Professional	-.30	.16	-1.89
Constant	.24	2.10	.12

LANGUAGE:

Total Score

Variable (N=27)	Coefficient	SE	t
Total IMQ	.01	.01	1.79
SES	.08	.11	.69
Constant	-2.94	1.69	-1.75

Three Dimensions

Variable (N=27)	Coefficient	SE	t
Climate	-.01	.04	-.12
SES	.08	.12	.73
Goal	.05	.05	1.14
Instruction	.01	.02	.48
Constant	-2.94	1.75	1.68

Ten Subscales

Variable (N=27)	Coefficient	SE	t
Standards	.16	.23	.71
Visibility	.11	.14	.74
Monitor	.04	.05	.80
SES	.07	.13	.57
Communicate	.12	.15	.79
Recognize	.10	.14	.71
Time	-.15	.16	-.96
Curriculum	-.02	.13	-.17
Supervision	.02	.07	.21
Frame	.03	.14	.21
Professional	-.17	.15	-1.14
Constant	-2.68	1.96	-1.37

READING:

Total Score

Variable (N=27)	Coefficient	SE	t
Total IMQ	.01	.01	.82
SES	-.04	.11	-.32
Constant	-1.48	1.69	-.87

Three Dimensions

Variable (N=27)	Coefficient	SE	t
Climate	.02	.03	.45
SES	-.02	.12	-.21
Goal	.02	.05	.44
Instruction	.00	.02	.00
Constant	-1.31	1.76	-.75

Ten Subscales

Variable (N=27)	Coefficient	SE	t
Standards	-.11	.23	-.50
Visibility	-.02	.14	-.11
Monitor	.00	.05	.06
SES	-.03	.13	-.21
Communicate	-.08	.15	-.52
Recognize	.06	.14	.42
Time	.05	.16	.29
Curriculum	.04	.13	.32
Supervision	.04	.08	.51
Frame	.13	.14	.88
Professional	-.04	.15	-.26
Constant	-1.01	1.98	-.51

Next, to determine if any dimension of instructional management predicts student achievement, achievement gains were regressed on scores for the three dimensions of instructional management: defining the school's mission, managing the instructional program and promoting a positive school climate. Again, no relationship was found between student achievement and instructional management as measured by the three dimensions.

Finally, achievement gains were regressed on scores from the 10 subscales on the IMQ. Four subscales were found to be significantly related to achievement gain in math. "Maintains High Visibility" and "Monitors Student Progress" were positively related to student achievement while "Provides Incentives for Teachers" and "Protects Instructional Time" were negatively related, ($p < .05$). These findings are difficult to interpret since the relationship of two subscales (protects instructional time and provides incentives for teachers) with student achievement is negative rather than positive - positive being the predicted direction for the relationship. The fact that the relationship of these two subscales is negative, and in the opposite direction, probably reflects multicollinearity, since the subscales are also moderately correlated. In addition, since it is likely that at least some subscales would be related to achievement gain (simply given the number of subscales) and since the above four subscales were not related to student achievement in either language or reading, the relationship between the four subscales and student achievement may be spurious and thus must

be characterized as weak.

In summary, according to the school effectiveness literature, principal instructional management behavior is positively related to student achievement. That is, principals that show relatively high levels of instructional management behavior are associated with schools with relatively higher student achievement. The results from the current study contain little evidence to support this relationship. When achievement gain was regressed on three levels of measurement of instructional management, little or no relationship was found between the particular level of measure of instructional management and student achievement. In sum, the current study does not support previous research that found a positive relationship between instructional management and student achievement.

There are several possible explanations for the lack of evidence of the relationship between student achievement and principal instructional management behavior. I will discuss three explanations. One possible explanation concerns the measures of instructional management. Many previous studies of instructional management (Weber, 1971; Brookover and Lezotte, 1979; Venezky and Winfield, 1979) used case study methodology which relied on observations and teacher interview data as measures of instructional management. These types of measures can be less reliable and valid. The current research used a behaviorally anchored rating scale which asks teachers to indicate the extent

to which principals performed specific instructional management behaviors. The behaviorally anchored rating scales probably provide a more objective assessment of principal instructional management behavior than previous measures. As a result, a more realistic assessment of the variance of instructional management was obtained. Under these conditions, instructional management was shown as unrelated to student achievement.

A second possible explanation is that the current study addressed some of the methodological criticisms of past effective schools research literature. Specifically, the study uses a comprehensive measure of student achievement, a curriculum-aligned test to measure student achievement, and it investigated schools at different levels of effectiveness and SES. These methodological refinements over previous effective schools research may, in part, account for the findings which are inconsistent with past research. That is, the relationship between instructional management and student achievement simply does not exist when the above methodological refinements are implemented. Thus, if the current findings are correct, then the critics of the effective schools research who complained of poor research methodology and warned schools not to rush to implement the findings of this research, were correct.

A final and more reasonable explanation concerns the focus of previous research versus the current research study. Previous research focused on effective schools in low SES neighborhoods while the current research included schools at all levels of

effectiveness, and more importantly, at all levels of SES. Thus, the relationship between instructional management and student achievement may exist, but perhaps only in low SES schools. Since the current study also included middle and high SES schools perhaps the findings indicate that instructional management is not as an important predictor of achievement gain in middle and high SES schools as it is in low SES schools. Recent research and thinking about the importance of context in effective schools research supports the idea that factors of effective schooling may be important in some but not all settings (Teddlie et al., 1987; Hallinger and Murphy, 1987; and Wimpleberg et al., 1987).

In order to test whether the relationship between instructional management and student achievement exists in low SES schools, I conducted an analysis of student achievement with instructional management in low SES schools, and also in middle and high SES schools combined. Low SES schools were defined as schools that were .5 standard deviation units above the district average on the percent of students receiving free or reduced lunches. Middle SES schools were defined as schools that were at least .5 standard deviation units within the district average on the percent of students receiving free and reduced lunches. High SES schools were defined as schools that were at least .5 standard deviation units below the district average on the percent of students receiving free or reduced lunches. Nine schools were defined as low SES and 18 schools were defined as middle and high SES schools. I want to emphasize that the sample

size of these two groups is really too small to consider the results from their analyses as valid and reliable. Rather, the results of the analyses of the two groups are more appropriately considered as "directions for future research" than as findings of this study.

Tables 7 and 8 show the results of regressions which were calculated for the low SES and then the combined middle and high SES schools. Two levels of measure of instructional management from the IMQ were used: the total score and the scores on the three dimensions. Again, as in the case of all schools, no relationship was found between student achievement and the total score on the IMQ. However, very different results were found when regressions were calculated for scores on the three dimensions. In low SES schools, the dimension, Defining the School's Mission, was positive and significantly related to student achievement in mathematics ($p < .05$), and positive and approaching significance in language ($p < .08$) and reading ($p < .16$). On the other hand, in the combined middle and high SES schools, the dimension, "Promoting a Positive School Climate, was significantly related to student achievement in language ($p < .05$) and approaching significance in reading ($p <. .08$). Thus, while there appears to be no relationship between instructional management and student achievement for all schools, the data suggest that future research should investigate the relationship between certain dimensions of instructional management and student achievement under different SES conditions.

Table 7
Results of Regression Analyses for Two Levels
of Measure of Instructional Management Behavior:
Total Score and Three Dimensions
For Low SES Schools, 1985-86

MATH:

Total Score

Variable (N=9)	Coefficient	SE	t
Total IMQ		.03	.13
SES	.11	.49	-.23
Constant	-.54	5.83	-.09

Three Dimensions

Variable (N=9)	Coefficient	SE	t
Climate	.24	.16	1.51
SES	-.99	.55	-1.80
Goal	.59	.22	2.75*
Instruction	-.19	.10	-.19
Constant	-.11	7.48	-.02

LANGUAGE:

Total Score

Variable (N=9)	Coefficient	SE	t
Total IMQ	.02	.02	.75
SES	.23	.41	.57
Constant	-3.73	4.85	-.77

Three Dimensions

Variable (N=9)	Coefficient	SE	t
Climate	.10	.14	.73
SES	-.28	.50	-.57
Goal	.35	.19	1.81
Instruction	-.07	.09	-.76
Constant	-5.36	6.70	-.80

READING:

Total Score

Variable (N=9)	Coefficient	SE	t
SES		.03	.11
Total IMQ	-.08	.42	-.19
Constant	-.46	4.93	-.09

Three Dimensions

Variable (N=9)	Coefficient	SE	t
Climate	.04	.15	.29
SES	-.53	.51	-1.03
Goal	.28	.20	1.43
Instruction	-.05	.09	-.59
Constant	-3.14	6.91	-.46

Table 8
Results of Regression Analyses for Two Levels
of Measure of Instructional Management Behavior:
Total Score and Three Dimensions
For Middle and High SES Schools, 1985-86

MATH:

Total Score

Variable (N=18)	Coefficient	SE	t
Total IMQ	.01	.01	1.24
SES	-.34	.20	-1.78
Constant	-2.67	1.89	-1.41

Three Dimensions

Variable (N=18)	Coefficient	SE	t
Climate	.11	.04	2.51*
SES	-.41	.19	-2.16
Goal	.05	.05	.98
Instruction	-.02	.02	-1.18
Constant	-2.32	1.84	-1.26

LANGUAGE:

Total Score

Variable (N=18)	Coefficient	SE	t
Total IMQ	.01	.01	1.72
SES	-.27	.18	-1.54
Constant	-3.12	1.71	-1.81

Three Dimensions

Variable (N=18)	Coefficient	SE	t
Climate	.02	.04	.55
SES	-.29	.18	-1.60
Goal	.05	.04	1.08
Instruction		.02	.04
Constant	-2.91	1.75	-1.66

READING:

Total Score

Variable (N=18)	Coefficient	SE	t
SES	-.34	.17	-1.98
Total IMQ	.01	.01	1.13
Constant	-2.25	1.69	-1.32

Three Dimensions

Variable (N=18)	Coefficient	SE	t
SES	-.38	.17	-2.16
Climate	.07	.04	1.79
Goal	.02	.05	.39
Instruction	-.01	.02	-.43
Constant	-2.10	1.69	-1.24

A more detailed look at the relationship between instructional management and SES may help illuminate the relationship between instructional management and student achievement. Bivariate regressions were calculated where instructional management was regressed on SES. Two levels of measures of instructional management from the IMQ were used: total score and scores on the three dimensions. A total of four regression were calculated. Table 9 shows that the total score on the IMQ was predicted by school SES, ($p < .05$). That is,

Table 9

Results of Regression Analyses:
Total Score and Three Dimensions
of Instructional Management on SES

	Dependent Variable: Total IMQ			
Regression 1:	Variable (N=27)	Coefficient	SE	T
	SES	-3.42	1.44	-2.37*
	Constant	206.43	1.44	143.22
	Dependent Variable: Goal			
Regression 2:	Variable (N=27)	Coefficient	SE	T
	SES	-.91	.35	-2.59*
	Constant	37.12	.35	105.48
	Dependent Variable: Instruction			
Regression 3:	Variable (N=27)	Coefficient	SE	T
	SES	-1.57	.96	-1.63
	Constant	141.14	.96	146.79
	Dependent Variable: Climate			
Regression 4:	Variable (N=27)	Coefficient	SE	T
	SES	-.95	.36	-2.65*
* p < .05	Constant	28.16	.36	78.6

principals in high SES schools more frequently displayed instructional management behaviors than principals in low SES schools.

Next, each of the three dimensions was regressed on SES. Two dimensions, "Defining the school's Mission" and "Promoting a Positive School Climate" were predicted by school SES, $p < .05$. Principals in high SES schools more frequently displayed behaviors that defined the school's mission and promoted a positive school climate than principals in low SES schools. A significant relationship was not found between SES and the dimension, Managing the Instructional Program.

I can now draw some conclusions regarding the relationships of instructional management with SES and instructional management with student achievement. First, the analysis of the relationship of instructional management with SES shows that SES is one predictor of the frequency of instructional management: principals in high SES schools display more instructional management behaviors than their counterparts in low SES schools. Thus, it appears that the school's outside environment plays a role in influencing the extent to which principals engage in instructional management.

This conclusion is consistent with the management literature's description of educational organizations. It states that schools are characterized as having multiple and ambiguous goals, utilizing an uncertain technology (instruction) to achieve its goals, and having a fluid participation of people in the

school instructional environment. The data from the current study suggests that the characteristics of educational organizations described above are more prevalent in low than high SES schools. This statement is confirmed by data on the differences between low and high SES schools. On the average, students in low SES schools have greater educational and non-educational needs than students in high SES schools. As a result, low SES schools must address these additional needs by having additional and sometimes ambiguous goals which can compete with the learning process. In addition, because students from low SES schools have a greater range of educational needs, the delivery of instruction is more complex and the outcome of the instruction that addresses these diverse needs become more uncertain than if the students had fewer needs. Finally, because of the higher mobility of students from low SES families and the higher turnover rate of teachers in low SES schools, the participation of people in school instructional activities is more fluid than in high SES schools. As a result of these factors, principals in low SES schools seem to have less time to spend on and thus, less control over instructional activities.

Second, the analysis of the relationship between student achievement and instructional management found that the level of instructional management does not predict achievement gain. Greater levels of instructional management is not necessarily reflected in greater achievement gain. This does not fit the conceptual framework posed earlier. According to the framework,

principals can impact instructional outcomes through instructional management which buffers teacher behavior and instruction from the conditions of the school environment (ambiguous goals, uncertain technology and fluid participation). While the conceptual framework does not explain the findings of the study, the framework is helpful in explaining the data on the possible interaction between different dimensions of instructional management and school SES, which I labelled "directions for future research". That is, in low SES schools, principals who spend more time defining the school's mission by framing the school's goals and communicating them to staff, thereby reducing the number and ambiguity of school goals, might be associated with higher student achievement than those principals who do not. Thus, by spending more time in defining the school's mission, the principal is able to buffer the goals of schooling from the impact of the environment.

On the other hand, in middle and high SES schools, principals who spend more time promoting a positive school climate might be associated with higher student achievement. I have already stated that there is less goal ambiguity in middle and high SES schools than in low SES schools. One reason often cited for this difference is that students from middle and high SES families are better prepared at home to attend to the academic function of school and have fewer educational and non-educational needs that the school must address. Thus, even though principals in middle and high SES schools spend more time

defining the school's mission than principals in low SES schools, the time principals spend on this activity does not seem to differentiate student achievement in these schools as it does in low SES schools. Rather, the amount of time that these principals spend in promoting a positive school climate seems to be their way of promoting school goals and making the outcome of instruction more certain. Thus principals who maintain a high visibility in the school, provide incentives for teachers by rewarding them for their efforts and enforce academic standards differentiate student achievement in middle and high SES schools. These behaviors seem to reinforce the more focused goals that these schools already possess and make the outcome of instruction more certain. It is important to repeat that the above two examples are only descriptions of how the conceptual framework may be helpful in explaining the results of future research that is suggested by data collected in the current study. Future research must determine if these relationships exist. Suffice it to state that the findings from the current research does not fit the conceptual framework.

CONCLUSIONS

At this time, it is impossible to identify the conclusions from the study until additional analyses are conducted on the relationship of student achievement with the linkages that principals use to influence teacher behavior and on the observational data collected during the study. Nevertheless,

preliminary statements can be made regarding the relationship of student achievement with principal instructional management behavior as well as with school SES. First, principal instructional management behavior seems to be influenced by the school's outside environment. Principals seem to have more time to devote to instructional management and more control over instructional matters in middle and high SES schools than in low SES schools. Second and more importantly, instructional management did not predict student achievement, and thus, does not support the findings of previous research. The relationship, if one exists, appears to be more complex than a simple statement that instructional management leads to increased student achievement. Finally, the data do suggest two areas for future research on the relationship between certain dimensions of instructional management and student achievement. First, in low SES schools, principals who buffer the school's academic goals from the impact of the surrounding environment by defining the school's mission might be associated with schools of higher achievement. Second, in middle and high SES schools, principals who reinforce the more focused goals that the school already possesses and makes the outcome of instruction more certain, might be associated with schools of higher achievement.

FOOTNOTES:

1. The measure of student achievement used here was more comprehensive than measures of student achievement used in other effective schools research studies. The use of test scores from multiple grade levels and multiple subject domains over two years addresses two criticisms of past research: it lacked a longitudinal analysis of school effectiveness, and student achievement was usually represented by a very restricted sample of student test scores. In addition, the fact that the PALT is a curriculum-aligned test, and thus measures what teachers are suppose to teach, increases the reliability of the use of student achievement as a measure of school effectiveness.

2. The 29 principals include 27 who participated in Part I. Of the remaining two principals, one participated in Part II while the second principal volunteered for both parts of the study but we were unable to establish a date within the timeframe set for the study.

3. These pieces of information about each behavioral event were suggested by a study conducted by Gross (1986) on instructional management in Montgomery County Public Schools.

APPENDIX A

Three Dimensions of Instructional Management an Eleven Sub-Factors by Hallinger, 1983.

1) Defines the School's Mission: An important aspect of the principals role in instructional management is to help define the school's mission or purpose

a. Frames the school's goals: This refers to the principal's role in determining the areas in which the school staff will focus its attention and resources in a given school year.

b. Communicates the school's goals: This refers to the way in which the principal communicates the school's important goals to teachers and students.

2) Manages the instructional program: This is the principal's role in working with teachers in areas specifically related to educational technology, curriculum and instruction.

a. Supervises and evaluates instruction: This refers to the principal's formal role of supervising and evaluating the instructional behavior of teachers.

b. Coordinates curriculum: This refers to the activities that the principal engages in to ensure that the curricular objectives are closely aligned with the content taught and content tested.

c. Monitors student progress: This refers to the activities that principals engage in to ensure that teachers use test results in goal setting, curricular assessment, planning and measuring progress towards goals.

d. Protects instructional time: This refers to the principal's activities designed to protect the classrooms' instructional time.

e. Promotes instructional improvement and professional development: This refers to the ways in which principals provide opportunities for teachers to discuss their work with colleagues and observe other teachers teach.

3) Promotes a positive school climate: This refers to the ways in which the principal helps to establish a climate in which effective instruction can take place.

a. Maintains high visibility: The principal maintains a

high visibility on campus in order to gather information about the school and to convey to teachers and students his concerns regarding the school.

b. Provides incentives for teachers: This refers to activities that the principal engages in to establish a work structure that makes teachers feels appreciated and rewarded for their efforts .

c. Enforces academic standards: The principal sets high academic standards for the teachers and students to meet and establishes remedial actions when standards are not met.

d. Provides incentives for learning: The principal creates a learning climate where students value academic achievement by providing opportunities for students to be recognized for their student achievement and improvement.

BIBLIOGRAPHY

Andrews, Richard and Soder, Roger and Jacoby, Daniel. Principal Roles, other In-School VAriables, and Academic Achievement by Ethnicity and SES. University of Washington. Paper presented st AERA Conference, 1986, San Francisco.

Armour, D., Conry-Oseguera, P., Cox, M., King, N., McDonnell, L., Pascal, A., Pauly, E., and Zellman, G. Analysis of the School Preferred Reading Program in Selected Los Angeles Minority Schools. Santa Monica CA: Rand Corporation, 1976.

Babbie, Earl. Survey Research Methods. Wadsworth Publishing Company, Belmont, CA. 1973.

Bickel, W. "Effective Schools: Knowledge, Dissemination, Inquiry". Educational Researcher. 12(1), Jan. 1983, pp. 3-6.

Blank, Rolf. Principal Leadership in Urban High Schools: Analysis of Variation in Leadership Characteristics. National Research Council. Paper presented at AERA, San Francisco, 1986.

Bogdan, Robert and Biklin, Sari. Qualitative Research for Education: An Introduction to Theory and Methodology. Allyn and Bacon. Boston. 1982.

Bossert, S., Dwyer, D., Rowan, B., Lee, G. "The Instructional Role of the Principal". Educational Administration Quarterly. 18(3), Summer, 1982, 34-64.

Brookover, W., and Lezotte, L. Changes in School Characteristics Coincident with Changes in Student Achievement. Occasional Paper No. 17. Institute for Research on Teaching, Michigan State, East Lansing, Michigan: May, 1979.

Cuban, L, "Turning the Frog into the Prince; Effective School Research, Policy, nd Practice at the District Level". Harvard Educational Review, 1984, 54, pp.129-151.

Dwyer, D., Lee, G., Barnett, B., Filby, N., and Rowan, B. Methodology: A Companion Volume for the Instructional Management Program's Field Study of Principals. Far West Laboratory, San Francisco, 1984.

Edmonds, R. "Some Schools Work and More Can". Social Policy. March/April, 1982, 9(5), pp. 28-32.

Edmonds, R. "Effective Schools for the Urban Poor". Educational Leadership. Oct. 1979, 37(1), pp. 15-24.

Edmonds, R. "Programs of School Improvement: An Overview". Educational Leadership. Dec. 1982, 40(3), pp. 4-11.

Eubanks, E. and Levine, D. "A First Look at Effective School Projects in New York and Milwaukee." Phi Delta Kappan, June 1983, 64(10), pp. 697-702.

Firestone, W., and Wilson, B. "Using Bureaucratic and Cultural Linkages to Improve Instruction: The Principal's Contribution." Educational Administration Quarterly. Spring 1985, 21(2), pp. 7-30.

Glasman, N., and Biniminov."Input-Output Analyses of Schools". Review of Educational Research. Winter, 1981, 51(4), PP.509-539.

Hallinger, P. Assessing the Instructional Management Behavior of Principals. Unpublished Doctoral Dissertation, Stanford University, 1983.

Hallinger, P., and Murphy. "Instructional Leadership and School Socioeconomic Status: A Preliminary Investigation". Administrator's Notebook, 1984, 31(5), pp. 1-7.

Helble, H. "The Work of a High School Principal". School Executives Magazine, November 1931, pp. 113-115.

Leithwood, K. and Montgomery, D. "The Role of the Elementary School Principal in Program Improvement." Review of Educational Research, Fall 1982, 52(3), pp. 309-339.

Lightfoot, S. Good High Schools. Basic Books, 1983.

Lortie, D. The Schoolteacher: A Sociological Study. Chicago: University of Chicago. 1975.

Lortie, D. The Elementary School Principal in Suburbia: An Occupational and Organizational Study", Chapter 4, Washington D.C., National Institute of Education, 1984.

MacKenzie, D. "Research for School Improvement: An Appraisal of Some Recent Trends". Educational Researcher, April, 1983, 12(4), pp.5-17.

Meyer, J., and Rowan, B. "Institutionalized Organizations:Formal Structure as Myth and Ceremony". American Journal of Sociology, 1977, 83, pp. 340-363.

Meyer, J., Scott, W., and Deal,T. Institutional and Technical Sources of Organizational Structure: Explaining the Structure of Educational Organizations. Project Report No. 79-A9, Institute for Research on Finance and Governance in Education, Stanford University, March 1979.

Meyer, J., and Rowan, B. The Structure of Educational

Organizations. in Meyer, M. (Ed.), Environments and Organizations. San Francisco. Jossey-Bass, 1978.

Miles, Matthew, and Huberman, A. Michael. Qualitative Data Analysis: A Sourcebook for New Methods. Beverly Hills. Sage Publications. 1984.

Miles, M. and Huberman, A.M. Drawing Valid Meaning from Qualitative Data: Toward a Shared Craft. Educational Researcher. May, 1984. p. 20 - 30.

Miskel. C., McDonald, D., and Bloom, S. "Structural and Expectancy Linkages Within Schools and Organizational Effectiveness". Educational Administration Quarterly, Winter 1983, 19(1), pp. 49-82.

Ogawa, R., "Teacher and Administrator: Elements of the Information Processing Repertoires of Schools". Educational Administration Quarterly, Spring, 1984, 20(2), pp. 5-24.

Orlich, Donald. Designing Sensible Surveys. Redgrave Publishing Co., Pleasantville, N.Y. 1978.

Peterson, K. "Mechanisms of Administrative Control over Managers in Educational Organizations". Administrative Science Quarterly, 1984, 29, pp. 573-597.

Purkey, S. and Smith, M. "Effective Schools: A Review". Elementary School Journal, March 1983, 83(4), pp. 427-452.

Ralph, J., and Fennessey, J. "Science or Reform: Some Questions About the Effective Schools Model". Phi Delta Kappan, June 1983, 64(10), pp. 689-694.

Rosenholtz, S. "Effective Schools: Interpreting the Evidence". American Journal of Education, May 1985, 93(3), pp. 352-388.

Rossman, G., Corbett, H.D., and Firestone, W. Professional Cultures, Improvement Efforts and Effectiveness: Findings From a Study of Three High Schools. Research for Better schools, Philadelphia. November, 1985.

Rowan, B., Bossert, S., and Dwyer, D. "Research on Effective Schools: A Cautionary Note". Educational Researcher, April, 1983, 12(4), 24-31.

Scott, W. Organizations. Englewood Cliffs, New Jersey. Prentice-Hall Inc., 1981.

Sergiovanni, T. "Leadership and Excellence in Schooling". Educational Leadership, February 1984, 41(5), pp. 4-13.

Teddlie, C., and Stringfield, S. A Differential Analysis of Effectiveness in Middle and Low Socioeconomic Status Schools. Southeastern Regional Council for Educational Improvement, 1985.

Thompson, J. Organizations in Action. New York. McGraw-Hill, 1967.

Tikunoff, W. J. et al., Part I, Volume II: Success Indicators and Consequences for Limited-English Language Proficient Students in SBIF Study. San Francisco, California. Far West Laboratory for Educational Research and Development. 1981.

Venezky, Richard and Wakefield, Linda. Schools That Succeed Beyond Expectations in Teaching Reading. Report for National Institute of Education, August, 1979.

Weber, G. Inner-City Children Can Be Taught to Read: Four Successful Schools. Occasional Paper No. 18. Washington D.C. Council for Basic Education, October 1971.

Weick, K. "Educational Organizations as Loosely Coupled Systems". Administrative Science Quarterly, December 1976, 21, pp. 1-19.

Willower, David and Smoth, Jonathan. Organizational Culture in Schools: Myth and Creation. Paper presented at AERA, San Francisco, 1986.

Wilson, B. and Corbett, H. "Organizations and Change: The Effects of School Linkages on the Quality of Implementation". Educational Administration Quarterly, Fall 1983, 19(4), pp. 85-104.

Wolcott, H. The Man in the Principal's Office. New York. Holt, Rinehart and Winston, 1973.